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Heidi A. Boehlefeld  
Renner, Otto, Boisselle & Sklar, P.L.L.  
Nineteenth Floor  
1621 Euclid Avenue  
Cleveland, OH 44115

EXAMINER

EGAN, BRIAN P

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 05/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/742,653

Applicant(s)

HANNINGTON, MICHAEL

Examiner

Brian P. Egan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 31-33, 35-40, 42, 43 and 46-77 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-33, 35-40, 42, 43 and 46-77 is/are rejected.
- 7) ☒ Claim(s) 35, 59 and 60 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 35, 59, and 60 are objected to. As noted in the previous office action, these claims contain method limitations that are given little to no patentable weight in article claims. Although the Applicant contends that these aforementioned claims are product-by-process claims, the preamble of each of these claims is clearly only claiming an article, not an article made by a specific process which would constitute a product-by-process claim. Regardless of whether the claim is viewed as an article claim with method limitations therein, or viewed a product-by-process claim, the method limitations need not be anticipated or fairly suggested by the prior art to render the claim rejected insofar as the structural limitations of the claim are met. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 31-33, 35-40, 42, 46-52, 55, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rusincovitch et al. (#5,676,787).

Rusincovitch teaches an adhesive article (Fig. 5) comprising a release liner having a release surface and a back surface (Col. 2, lines 42-45), a continuous layer of a pressure sensitive adhesive having a front surface and a back surface and end edges (Fig. 4, #16; Col. 9, lines 3-9)

wherein the front surface of the adhesive is adhered to the release surface of the release liner (“Then the decorative sheet having the release layer and spacers on one side and PSA on its other side is rolled up to form a roll. This causes the spacers and release layer to contact the PSA.” Col. 2, lines 49-52), and a pattern of non-adhesive material forms embedded into the release surface of the release liner wherein the non-adhesive material forms have top surfaces (Fig. 4B). The back surface of the release liner has a release coating thereon (Col. 11, line 28-35). The non-adhesive material forms have a thickness of 0.05 mils to 0.50 mils ( $5\mu$ - $500\mu$ ; i.e. within the range of 30nm-  $100\mu$ ; Col. 9, lines 51-54). A facestock is applied to the back surface of the aforementioned adhesive layer (Figs. 1-2, #12). The non-adhesive material forms are applied by printing (Col. 2, lines 43-45) in a pattern comprising a plurality of dots, lines, or combinations thereof (Fig. 8A and 8B; Col. 9, lines 35-42). Furthermore, the thickness of the non-adhesive material forms is sufficient enough to cause deformation of the facestock upon application of the adhesive article to a substrate (Col. 9, lines 26-33).

Furthermore, Rusincovitch et al. teach that anything that can be used as the ink on a printing machine can be used for fabricating the spacers so long as it is not sticky or tacky upon drying so that the spacers can slide over the surface of a wall. Thus, any plastic, including resinous and elastomeric material, which can be placed in solution, dispersion, or emulsion, and which is not sticky or tacky on drying would be used. The spacers can be made of organic polymeric material such as polyurethane, polyvinyl alcohol, acrylic polymers, acetate, polyethylene, polypropylene, or polystyrene and the like (Col. 10, lines 30-39). Therefore, in the absence of unexpected results, it would have been obvious to one of ordinary skill in the art at

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the time applicant's invention was made to have used either UV curable ink or coalesced ink in order to obtain the inherent non-adhesive properties of both UV-cured and coalesced inks.

Rusincovitch et al. also teach that the size, location, repeating, design, and surface area of the spacers can be varied to match or register with the printed or embossed patterns on the face of the decorative sheet. These aforementioned properties are variable for the purpose of significantly reducing the noticeability of the spacers. The spacers on the back of the decorative sheet can be circles, diamonds, squares, ellipses, rectangles, or other shapes (such as porous shaped), including irregular shapes such as wavy lines (Col. 9, lines 35-42). Rusincovitch et al. teach that the spacers cover from 5-50% of the back surface (Col. 9, lines 55-57) and that the percent of back surface area occupied by the spacers are modified to allow the decorative sheet to be slidably movable on the surface of a wall (Col. 9, lines 15-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have modified Rusincovitch et al. to include a plurality of lines, either in vertical, horizontal, or grid form depending on the printed or embossed pattern on the face of the decorative sheet and therefore creating either a random or patterned textured surface, of non-adhesive material forms ("spacers") with variable thickness, width, and percent coverage of the back surface in order to provide an adhesive article that is slidably movable on the surface of a wall while at the same time having a reduced noticeability of the spacers for aesthetic reasons.

Rusincovitch et al. teach that after the non-adhesive material forms are applied to the release liner surface, the release liner is passed through a dryer and fed through a series of rollers – all of which is prior to the application of the adhesive layer (Col. 5, line 66 to Col. 6, line 10). The Examiner agrees with the applicants contention that Rusincovitch et al. teach the non-

adhesive forms protrude from the release liner surface (Col. 6, lines 57-61), but this embodiment is found immediately after the printing operation and prior to the passage through a series of rollers. As detailed by the applicants on page 18, paragraph [0047] of the specification, “embedding may be carried out using pressure and/or heated rollers or a platen, whereby the non-adhesive material is pressed into the release liner.” Therefore, in the absence of unexpected results, Rusincovitch et al. teach an equivalent method of forming the release liner and the non-adhesive material forms would inherently become embedded to a height equal to or below the top plane of the release liner given the equivalence in the method of forming the release liner, i.e., the use of rollers prior to the application of the adhesive layer.

The Applicant’s contend that it is improper to look to the Applicant’s specification to demonstrate that the non-adhesive material forms would be embedded below the surface of the release liner. The Examiner respectfully disagrees. Insofar as two equivalent methods are shown, the burden is upon the Applicant to prove that the material forms are not embedded in the release liner after the rolling operations as disclosed in Rusincovitch. Furthermore, even if the Applicants do prove otherwise, the Applicant’s have provided no unexpected results that show any functional difference between partially embedding or fully embedding the non-adhesive material – to the contrary, the Applicant’s state that the non-adhesive forms may be partially or fully embedded into the release liner (see Specification, p. 18, paragraph [0047]). Therefore, even if Rusincovitch et al. fails to fully embed the non-adhesive ink into the release liner, it would have been obvious to one of ordinary skill in the art at the time Applicant’s invention was made to have rearranged the parts of the invention such that the non-adhesive ink was fully embedded into the release liner, since it has been held that rearranging parts of an invention

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involves only routine skill in the art, absent a demonstration of unexpected results. *In re Japikse*, 86 USPQ 70.

4. Claims 31-33, 35-40, 42-43, 46, 49-53, 55, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calhoun et al. (#5,141,790) in view of Rusincovitch et al. ('787).

Calhoun et al. teach an adhesive article comprising a release liner having a top release surface and a bottom surface (Fig. 1, #12), a continuous layer of adhesive having a bottom surface and a top surface and end edges wherein the bottom surface of the adhesive is adhered to the top release surface of the release liner (Fig. 1, #17), and a pattern of non-adhesive material forms embedded into the top release surface of the release liner such that the non-adhesive material forms have a top surface wherein the top surface of the material forms is even with or below the plane of the top release surface of the release liner (Fig. 1, #15). A facestock is applied to the top surface of the adhesive layer (Fig. 1, #18). The non-adhesive material forms have an average thickness between 30 nanometers and 100 micrometers (Col. 3, lines 48-49). The pattern of non-adhesive material forms comprises a plurality of dots (see Fig. 1). The adhesive layer comprises a pressure sensitive adhesive (see Abstract) and is heat activated at high temperatures wherein it melts to form bonds with the non-adhesive material forms (Col. 4, lines 15-20). The release liner has a random textured surface wherein the release liner and adhesive layer have complementary patterned finishes (see Fig. 1). The release liner further comprises a paper substrate that is coated with a release coating (Col. 7, lines 25-31).

Calhoun et al. teach the use of glass microspheres rather than polymeric ink as the non-adhesive material forms.

Rusincovitch, however, explicitly attempt to correct the deficiencies in Calhoun et al., mainly the use of glass microspheres, by using ink (inclusive of both UV-cured and coalesced ink) instead of the microspheres (Col. 2, lines 15-24). Rusincovitch teach, as noted above, that the size, location, repeating, design, and surface area of the spacers can be varied to match or register with the printed or embossed patterns on the face of the decorative sheet. These aforementioned properties are variable for the purpose of significantly reducing the noticeability of the spacers – the deficiency inherent in the use of microspheres (Col. 1, line 65 to Col. 2, line 2). The forms on the back of the decorative sheet can be circles, diamonds, squares, ellipses, rectangles, or other shapes (such as porous shaped), including irregular shapes such as wavy lines (Col. 9, lines 35-42). Rusincovitch et al. teach that the spacers cover from 5-50% of the back surface (Col. 9, lines 55-57) and that the percent of back surface area occupied by the spacers are modified to allow the decorative sheet to be slidably movable on the surface of a wall (Col. 9, lines 15-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have modified Rusincovitch et al. to include a plurality of lines, either in vertical, horizontal, or grid form depending on the printed or embossed pattern on the face of the decorative sheet and therefore creating either a random or patterned textured surface, of non-adhesive material forms ("spacers") with variable thickness, width, and percent coverage of the back surface in order to provide an adhesive article that is slidably movable on the surface of a wall while at the same time having a reduced noticeability of the spacers for aesthetic reasons. Thus, Rusincovitch teaches the use of non-adhesive material forms made of ink rather than glass microspheres for the purpose of providing a repositionable adhesive wherein the non-material forms are not noticeable when viewing the substrate from the



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facestock surface. It would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have modified a repositionable surface using glass microspheres with ink forms for the purpose of providing a repositionable adhesive wherein the non-material forms are not noticeable when viewing the substrate from the facestock surface as taught by Rusincovitch.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Calhoun et al. by replacing the glass microspheres with non-adhesive material ink as taught by Rusincovitch in order to provide a repositionable adhesive wherein the non-material forms are not noticeable when viewing the substrate from the facestock surface.

5. Claims 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calhoun et al. ('790) in view of Rusincovitch et al. ('787), and further in view of Plamthottam et al. (#5,180,635).

Calhoun et al. and Rusincovitch et al. teach an adhesive article as detailed above. The aforementioned prior art fails to teach the use of porous, elastomeric non-adhesive material forms.

Plamthottam et al., however, teach a high-performance adhesive tape comprising non-adhesive materials which may be made of any suitable material including glass, ceramic, polymeric, and carbon materials (Col. 4, lines 58-61) all of which may be solid, hollow or porous, and rigid or elastomeric (Col. 4, lines 57-58) depending on the desired end product. Plamthottam et al. teach the use of the non-adhesive material forms for the purpose of reducing the density of the carrier layers, improving peel adhesion and thereby improving conformability,

and also improving the strength properties of the tape (Col. 4, lines 51-56). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time applicants invention was made to have provided an adhesive article with non-adhesive, porous elastomeric materials for the purpose of reducing the density of the carrier layers, improving peel adhesion and thereby improving conformability, and also improving the strength properties of the tape as taught by Plamthottam et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicants invention was made to have modified the aforementioned prior art to include porous elastomeric materials as taught by Plamthottam et al. in order to reduce the density of the carrier layers, improve peel adhesion and thereby improve conformability, and also improve the strength properties of the adhesive article.

6. Claims 54 and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calhoun et al. (#5,141,790) in view of Rusincovitch et al. ('787), and further in view of Calhoun et al. (#5,585,178).

Calhoun et al. ('790) and Rusincovitch et al. teach an adhesive article as detailed above. The aforementioned prior art fails to teach a second adhesive layer adhered to the back surface of the release liner wherein a facestock is adhered to the second (or first) adhesive.

Calhoun et al. ('178), however, teach a composite adhesive tape with two adhesive layers, the second adhesive being adhered to the back side of the release liner (See Fig. 4). The two layered adhesive is used for the purpose of having two adhesives providing different properties – i.e., such that the first adhesive can have a repositionable property and the second adhesive can be used to build bond strength during aging when adhered to a substrate/facestock.

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(Col. 3, lines 30-35). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time applicant's invention was made to have used multiple layers of adhesive in an adhesive article for the purpose of providing varying properties to the article wherein one adhesive provides repositionability and the second adhesive builds bond strength through aging as taught by Calhoun et al. ('178).

Therefore, it would have been obvious to one of ordinary skill at the time applicant's invention was made to have modified the aforementioned prior art to include a second layer of adhesive as taught by Calhoun et al. ('178) in order to provide an adhesive article with varying properties via the use of multiple adhesives wherein one adhesive provides the article with repositionability and the other builds bond strength through aging and is bonded to a facestock.

7. Claims 60-62, 66-72, and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calhoun et al. ('790) in view of Torobin (#4,582,534).

Calhoun et al. teaches an adhesive article as detailed above. Calhoun et al. teaches the use of glass microspheres but fails to teach the use of vacuum metallized or sputtered non-adhesive material forms.

Torobin, however, teaches the use of glass microspheres with a vacuum metallized or sputtered layer of thin metal (see Abstract; Col. 1, lines 30-36; Col. 4, line 63 to Col. 5, line 3). Torobin teaches the use of glass microspheres in combination with a vacuum metallized or sputtered metal layer for the purpose of providing a substrate with microspheres superior in strength while light in weight (Col. 2, lines 5-11). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have modified a glass microsphere by including a vacuum metallized or sputtered metal layer on

the microsphere for the purpose of providing a substrate with microspheres superior in strength while light in weight as taught by Torobin.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Calhoun et al. by including a vacuum metallized or sputtered metal layer on the surface of the glass microspheres as taught by Torobin in order to provide a substrate with microspheres superior in strength while light in weight.

8. Claims 63-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calhoun et al. ('790) in view of Torobin ('534), and further in view of GB #1,511,060.

Calhoun et al. and Torobin teach an adhesive article as detailed above. Although Calhoun et al. teach that the non-adhesive material forms are substantially uniformly distributed, the aforementioned prior art fails to teach that the substantially uniform distribution can be in the form of a grid pattern which intersects at least 50% of the lines intersect the edges of the article wherein the lines are between about 12 and 250 microns wide and 30 to 3000 nanometers thick.

GB '060, however, teaches an air impermeable adhesive sheet, provided on its back surface with a heat and pressure-sensitive adhesive, wherein the surface of the adhesive layer is provided with one or more elongate ridges or recesses that are 45 to 100 microns thick and up to 1000 microns wide (p.5, lines 86-105) and wherein at least one end of such ridge or recess intersects the end edge of the sheet. Further, GB '060 teaches that a grid pattern (Fig. 5-3) of parallel straight lines can be used for the purpose of effectively achieving the air egressing effect (p.2, lines 116-128). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time applicant's invention was made to have used a grid pattern in an adhesive article for the purpose of achieving the air egressing effect as taught by GB '060.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have modified the aforementioned prior art to include a grid pattern as taught by GB '060 in order to allow the non-adhesive material forms to form a pattern that can effectively achieve the air egressing effect.

The applicants primary contention in relation to the teachings of GB '060 is that GB '060 would actually discourage the use of non-adhesive material forms since the patterns must collapse during the application. It is notoriously well known in the repositionable adhesive article art, however, that microspheres as used by Calhoun et al. are made such that they collapse (and break in the instance of glass microspheres) once the adhesive article has been repositioned to its desired substrate such that the adhesive layer achieves a substantially uniform thickness. Therefore, the teachings of GB '060 are in line with those of Calhoun et al. Furthermore, the applicant contends that the application of heat is required for degassing of the adhesive article which in turn collapses the adhesive tape. This aforementioned process limitation is irrelevant to the overall structure taught by GB '060. Whether the adhesive article is collapsed via heat or via pressure (such as the application of enough pressure to deform or crush the microspheres) is not relevant – in both instances, a route of air egress is provided and therefore the structural limitations met.

9. Claims 73 and 75-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calhoun et al. ('790) in view of Torobin ('534), and further in view of Calhoun et al. ('178).

Calhoun et al. ('790) and Torobin teach an adhesive article as detailed above. The aforementioned prior art fails to teach a second adhesive layer adhered to the back surface of the release liner wherein a facestock is adhered to the second (or first) adhesive.

Calhoun et al. ('178), however, teach a composite adhesive tape with two adhesive layers, the second adhesive being adhered to the back side of the release liner (See Fig. 4). The two layered adhesive is used for the purpose of having two adhesives providing different properties – i.e., such that the first adhesive can have a repositionable property and the second adhesive can be used to build bond strength during aging when adhered to a substrate/facestock. (Col. 3, lines 30-35). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time applicant's invention was made to have used multiple layers of adhesive in an adhesive article for the purpose of providing varying properties to the article wherein one adhesive provides repositionability and the second adhesive builds bond strength through aging as taught by Calhoun et al. ('178).

Therefore, it would have been obvious to one of ordinary skill at the time applicant's invention was made to have modified the aforementioned prior art to include a second layer of adhesive as taught by Calhoun et al. ('178) in order to provide an adhesive article with varying properties via the use of multiple adhesives wherein one adhesive provides the article with repositionability and the other builds bond strength through aging and is bonded to a facestock.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 31-33, 35-40, 42-43, and 46-77 have been considered but are moot in view of the new ground(s) of rejection.

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***Conclusion***

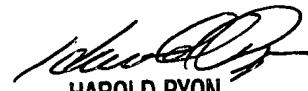
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Egan whose telephone number is 703-305-3144. The examiner can normally be reached on M-F, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



BPE  
April 28, 2003



HAROLD PYON  
SUPERVISORY PATENT EXAMINER

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4/29/03